HAWAII STATE DEPARTMENT OF HEALTH

The **Hazard Evaluation and Emergency Response Office** (HEER Office) is part of the Hawai'i Department of Health (HDOH) Environmental Health Administration whose mission is to protect human health and the environment. The HEER Office provides leadership, support, and partnership in preventing, planning for, responding to, and enforcing environmental laws relating to releases or threats of releases of hazardous substances.

Construction - Environmental Hazard Management Plans (EHMP)

What is a Construction-EHMP?

A Construction-EHMP (C-EHMP) documents the presence of a contaminated environmental medium (e.g., soil, soil vapor, sediment, surface water, and/or groundwater) on a site and describes how the contamination must be managed during planned construction activities. C-EHMPs are typically for handling contamination during surface or subsurface construction activities that could expose construction workers, nearby people, or ecological receptors.

Example of map noting specific areas of contamination onsite as well as types of contamination.

The C-EHMP presents all necessary information in a single, user-friendly, stand-alone document that identifies what contaminants have been identified to be present at the site above unrestricted/residential use screening criteria, where the identified contamination is located (if known), potential environmental concerns posed by the contamination, appropriate handling and disposal instructions, and responsibilities of individual parties (owners and operators) to ensure that all requirements outlined in the C-EHMP are followed and nobody is harmed. The HDOH HEER Office requires all contaminant concentrations to be screened against unrestricted/residential land use criteria during environmental assessments, even if a site is located in an industrial zoned area, so that potential hazards for the most sensitive possible (or potential future) land use will be identified. Specific contaminants, potential environmental hazards, and the potential routes of exposure (i.e., a Conceptual Site Model) are documented in an Environmental Hazard Evaluation (EHE). A brief EHE is typically included as a section within the C-EHMP, although a more detailed EHE might be prepared in a separate document.

Purpose of a C-EHMP

- ✓ **Provides protection to on-site workers, the general public, and ecological receptors from exposure to chemical hazards during construction activities**
- ✓ **Identifies specific chemicals of concern and their potential hazards, and provides a summary of site environmental investigations**
- ✓ **Informs landowners (and site users) about their responsibility to protect others on the site from exposure to contaminants**
- ✓ **Identifies construction activities that may be conducted at the site and provides contact information for those responsible for implementing the plan**

What is typically included in a C-EHMP?

The C-EHMP documents the chemicals of concern associated with the site contamination, the location and depth of the soil, soil vapor, sediment, surface water, and/or groundwater contamination present, and the specific potential environmental hazards posed by those chemicals. These potential hazards might include direct exposure of construction workers to the chemicals, the potential for vapors from contaminated soil or groundwater to intrude into overlying buildings, the presence of contaminated groundwater that exceeds acceptable levels for drinking water or that could be toxic to aquatic life if discharged into storm sewers during underground utility work, or the presence of soil and water heavily contaminated with contaminants that could foul equipment, pose potential explosion/backflash risks, or cause odor and runoff concerns if handled improperly.

The C-EHMP must provide information on proper handling and disposal of contaminated material during construction activities. This includes identifying best management practices (BMPs) to prevent the spread of contamination, the planned re-use and disposal locations for soil and groundwater, the appropriate sampling frequency and methodology based on planned re-use/disposal location, and health and safety measures to be taken to protect human health during the disturbance of contaminated media. The C-EHMP should also include emergency and response actions if people are accidentally or unintentionally exposed to contamination or if a release of contaminants from the site occurs.

Most C-EHMPs require that a qualified environmental professional provide oversight during disturbance of any potentially contaminated media onsite. It is recommended that this professional have experience conducting environmental oversight during construction to ensure compliance with the C-EHMP and provide appropriate guidance to the contractors during construction.

How long is the C-EHMP required to be maintained?

The C-EHMP provides for management of onsite contamination during identified construction activities. Following completion of the construction activities, if residual contamination remains at the site, then an EHMP for long-term management of the residual contamination at the site is needed. This long-term EHMP must be maintained and management activities, notifications, and training followed unless site conditions change. To ensure human health and the environment will be protected, landowners must coordinate with HEER Office and get prior approval for activities that might disturb contamination managed under a long-term EHMP. If at a later time, a site is no longer believed to pose any hazards under unrestricted/residential use criteria, data supporting a change in status can be submitted to the HEER Office for review. If the data demonstrates that there are no further residual hazards under unrestricted land use, HDOH may issue a No Further Action (NFA) letter without institutional controls and an EHMP for the property would no longer be necessary.

All on-site workers and contractors that expose soil (for example for utility repairs and even landscaping), must have access to and be informed of the C-EHMP on residual contamination at the site and what protection(s) may be needed.

What are the landowner's responsibilities under a C-EHMP?

The landowner is the primary responsible party for the implementation of the C-EHMP at the site. The principle responsibility of the landowner is to make sure the requirements of the C-EHMP are accessible and properly carried out in order to protect people living and working on the property from the remaining contamination. Oversight and compliance with the requirements described in the C-EHMP are also the responsibility of the landowner to ensure protection of the environment.

Training and notification about the on-site environmental hazards for people living and working on the site, including temporary workers like construction workers, is a key responsibility of landowners. Even if there are on-site activities conducted at the site by parties other than the landowner, the landowner is responsible for notifying these parties of the C-EHMP, providing them with a copy of the C-EHMP, if appropriate, and ensuring they are following the necessary procedures to protect human health and the environment. The C-EHMP will provide direction on how to conduct site actions that could affect the on-site contamination. Following these directions, even if the work is done by contractors, is ultimately the responsibility of the landowner.

The landowner and contractors conducting work at the site should coordinate with HDOH, as necessary, to ensure that the C-EHMP is properly followed. In addition, if following the completion of construction activities, contamination remains at the site, the landowner is responsible for the preparation and implementation of a long-term EHMP.

What are the contractors/lessees responsibilities?

Even though the ultimate responsibility for the implementation of the C-EHMP falls to the landowner, lessees and contractors are also responsible for implementing the C-EHMP correctly to protect themselves, onsite workers, the general public, their loved-ones, and ecological receptors. In general, this means, keep contamination onsite, and if contaminated soil is transported offsite, ensure it is appropriately disposed of at a HDOH acceptable facility. Keep any documentation such as truck logs and manifests of subcontractor's trucking operations to keep yourself from accumulating fines. Press the importance of responsibly handling potential contaminated material onto your employees.

How do you find out if a site you are working on is contaminated?

To find out if a site has potential contaminated material, visit the HEER office's iHEER viewer at : https://eha-cloud.doh.hawaii.gov/iheer/#!/viewer
Markers show the location of Sites (green markers) or Emergency Incidences (blue markers). Use the "zoom to" button on the top left to zoom to the island of interest and scroll to zoom closer to your project location. Note that contamination usually extends outside the marker. The marker is only a representative marker for the location.

Does HDOH have a template for a C-EHMP?

The HDOH has a template for a C-EHMP available on our website at the below link under the "What's New" section. To expedite approval of a C-EHMP it is recommended to use this template. Additional information

should be included as agreed to by the landowner and HDOH. An outline for an EHMP is also included in Section 18.5.16 of the HDOH Technical Guidance Manual (TGM).

C-EHMP Template - http://eha-web.doh.hawaii.gov/eha-cma/Org/HEER/

Further Information

For questions related to Environmental Hazard Management Plans contact:

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Website: http://hawaii.gov/doh/heer

Other Resources for Environmental Hazard Management Plans:

The on-line HEER Office Technical Guidance Manual (TGM) provides information about EHMPs in Sections 18.5.16, 19.3, and 19.6. The TGM is available at: http://www.hawaiidoh.org

HDOH, 2007. Hawai'i Department of Health, Office of Hazard Evaluation and Emergency Response. Long-Term Management of Petroleum-Contaminated Soil and Groundwater. June 2007. Website URL: http://www.hawaiidoh.com/references/HDOH%202007c.pdf

HDOH, 2017. Hawai'i Department of Health, Hazard Evaluation and Emergency Response Office, Guidance for Soil Stockpile Characterization and Evaluation of Imported and Exported Fill Material. October 2017. Website URL: http://eha-web.doh.hawaii.gov/eha-cma/Leaders/HEER/technical-guidance-and-fact-sheets

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